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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/600,320	07/16/2000	John Peter Gahan		1490

7590 04/24/2002
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EXAMINER

TRIEU, THAI BA

ART UNIT	PAPER NUMBER
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3748

DATE MAILED: 04/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/600,320

Applicant(s)

GAHAN, JOHN PETER

Examiner

Thai-Ba Trieu

Art Unit

3748

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☒ Claim(s) 13-15 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a) because they fail to show **“O” Ring 88** (See Page 6, lines 16 and 19; and Page 10, lines 2 and 11), **“timing ring control mechanism 17I and 17T”** (See Page 6, line 12); **“mechanism 17IB”** (See Page 12, line 23), **“circuits and mechanisms 17TA and 17TB”** (See Page 12, line 23) as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

Claims **1-2, 4-6, and 9-15** are objected to because of the following informalities:

- In claim 1, line 3, -- **a** -- should be inserted before **“rotation”**; line 4, -- **a** -- should be inserted before **“rotary motion”**; line 7, -- **an** -- should be inserted before **“automatically rotatable induction”**; and line 8, -- **an** -- should be inserted before **“automatically variable air-flow”**.
- In claim 2, line 2, -- **a** -- should be inserted before **“ratio”**.

- In claim 4, line 1, -- a -- should be inserted before **"timing"**; and line 2, **"the"** before **"end casings"** should be deleted.
- In claim 5, line 2, -- an -- should be inserted before **"intimate contact"**.
- In claim 6, line 2, -- a -- should be inserted before **"fresh cool air"**; and **"crown"**; and line 3, **"any"** before **"residual "** should be replaced by -- an --.
- In claim 9, line 1, -- an -- should be inserted before **"air vent opening"**;
- In claim 10, line 1, **"the"** before **"sealing"** should be replaced by -- a --; and line 2, **"itself"** after **"exhaust gas"** should be deleted.
- In claim 11, line 1, -- a -- should be inserted before **"movement"**; **"big-end"**, and **"connecting rod"**.
- In claim 12, line 1, **"ones"** after **"individual"** should be replaced by -- one -; and line 2, -- a -- should be inserted before **"cylinder wall"**
- In claim 13, line 1, -- a -- should be inserted before **"primary"**; -- an -- should be inserted before **"induced gas"**; -- a -- should be inserted before **"solid base"**;

- In claim 14, line 1, ***“any”*** before ***“unused”*** should be replaced by ***-- an --***; and lines 1-2, ***“the”*** before ***“incoming charge”*** should be replaced by ***-- an --***.

- In claim 15, line 1, ***-- an --*** should be inserted before ***“expansion”***; and ***“operating”***; and line 2, ***-- a --*** should be inserted before ***“sealing”***.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-2, and 8 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- In claim 1, line 2, and claim 2, line 1 ***“indirectly”*** before ***“geared”*** render the claims indefinite. The scope of the word “indirectly” is not discernable by the examiner, the gearing appears to be direct, not indirect.

- In claim 1, line 7, and claim 8, line 1, ***“and/or”*** before ***“transfer phases”*** render the claims indefinite. The words ***“and/or”*** should be replaced by ***--at least one of --***. Explanation ***“and/or”*** amendment is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Gahan (Patent Number WO 93/11343).

Regarding claim 1, Gahan discloses a two-stroke motor of the rotary piston type including:

a cylinder block (114) containing a plurality of cylinders, rotatably mounted within an engine housing (111) and ***indirectly*** geared to a crankshaft (113), journaled for a rotation within said engine housing (111) and piston members (115) supported upon said crankshaft (113) for a rotary motion within said cylinder block (114) as said crankshaft and said cylinder block rotate in the same direction (See Page 2, lines 2-11, Page 7, lines 18-25, Page 10, lines 10-19); and

said cylinder block (114) being sealed against said engine housing by slidably mounted circular side seal rings having provision for automatically rotatable induction ***and/or*** transfer timing rings and with said engine housing having peripheral pivoted air vents for automatically variable air flow (See Figures 12-13, Page 14, lines 21-27, Page 15, lines 1-26, Page 19, lines 14-19, and Page 20, lines 1-23).

Regarding claim 2, Gahan discloses the motor of claim 1 wherein said under block is **indirectly** geared to said crankshaft by epicyclic gears of a ratio 2:1 (See Page 7, lines 26-27, Page 8, lines 6-8, and Page 12, lines 14-18).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gahan (Patent Number WO 93/11343), as applied in the rejection of claims 1-2, in view of Weber (Patent Number 5,221,237).

Regarding claim 3, Gahan discloses the invention as recited above; however, Gahan fails to disclose said epicyclic gears comprising two "piggy-back" idler gears.

Weber teaches that it is conventional in the motion drive assembly art, to utilize two "piggy-back" idler gears (129, 161) (See Figures 4-5, Column 1, lines 50-68, and Column 2, lines 1-46).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized two "piggy-back" idler gears, as taught by Weber to improve the incremental rotations of the shaft, in the Gahan device.

Regarding claims 4-5, Gahan further discloses the motor of claim 3 wherein a timing of the entry of combustion gases into said cylinders is controlled by side entry tracts (18, 36) located in end casings (48) for communication with ports (10, 11, 12) in said cylinders (9); said ports (10, 11, 12) of said cylinders (9) and said side entry tracts (18, 36) are sealed by an intimate contact between rotating cylinder side seal rings and stationary casing side seal rings and exhaust plates (See Figures 6-9, Page 12, lines 11-27, Page 13, lines 1-28, Page 14, lines 1-28).

Regarding claim 6, Gahan further discloses the motor of claim 5 wherein said cylinders are open to atmosphere after combustion via air chokes and reed valves, allowing a fresh cold air to pass across a crown of individual one of said piston members, thereby purging said cylinders of an residual exhaust gas (See Page 10, lines 23-28, Page 11, lines 1-3, Page 18, lines 1-3).

Regarding claim 7, Gahan discloses the motor of claim 6 wherein the quantity of said cold air is synchronized by said air chokes to be proportional to the quantity of fuel air mixture consumed by said motor (See Figure 7, Page 14, lines 1-3, Page 17, lines 23-28, and Page 18, line 1).

Regarding claim 8, Gahan discloses the motor of claim 7 wherein the induction *and/or* transfer phases of said motor are automatically varied by rotatable timing rings relative to the speed of said motor (See Page 26, lines 9-23, Page 28, lines 20-25).

Regarding claim 9, Gahan further discloses the motor of claim 8 wherein an air vent opening is automatically variable to ensure that the temperature of said motor remains within set limits during operation (See Page 22, line 22-28, and Page 23, lines 1-2).

Regarding claim 10, discloses the motor of claim 9 wherein a sealing of the casing-side exhaust plate against the cylinder-side outer seal ring is accomplished by the pressure of the exhaust gas (See Page 17, lines 2-15).

Regarding claim 11, Gahan discloses the motor of claim 10 wherein a movement of a big-end of a connecting rod (119, 8) is controlled by rigid guides in the crankcase (See Figures 1-2, 6-7, and 10).

Regarding claim 12, Gahan discloses the motor of claim 11 wherein individual one of said piston members (115, 13) is cooled internally via air ports (120, 36) in a cylinder wall (See Figures 3 and 11).

Allowable Subject Matter

Claims **13-15** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Cantoni (US Patent Number 2,242,231) discloses an internal combustion engine being encircled by an annular ported valve member which respect to the cylinder bank having relative rotary motion.
- Sklenar (US Patent Number 2,273,900) discloses an internal combustion engine having a transmission arrangement.
- Lappa (US Patent Number 4,010,719) discloses a rotary combustion engine.
- Farris (US Patent Number 4,038,949) discloses a rotary-radial combustion engine.
- Lappa (US Patent Number 4,136,646) discloses a two-cycle rotary combustion engine.
- Kienle (US Patent Number 5,365,892) discloses a rotary combustion engine.
- Gail (US Patent Number 5,720,241) discloses a rotary combustion engine
- Russell (Patent Number WO 87/03042) discloses an orbital engine with radial cylinder.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai-Ba Trieu whose telephone number is (703) 308-6450. The examiner can normally be reached on Monday - Friday (7:30-5:00), first Friday off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on (703) 308-2623. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 872-9302 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0861.

TTB
April 18, 2002



Thai-Ba Trieu
Patent Examiner
Art Unit 3748



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